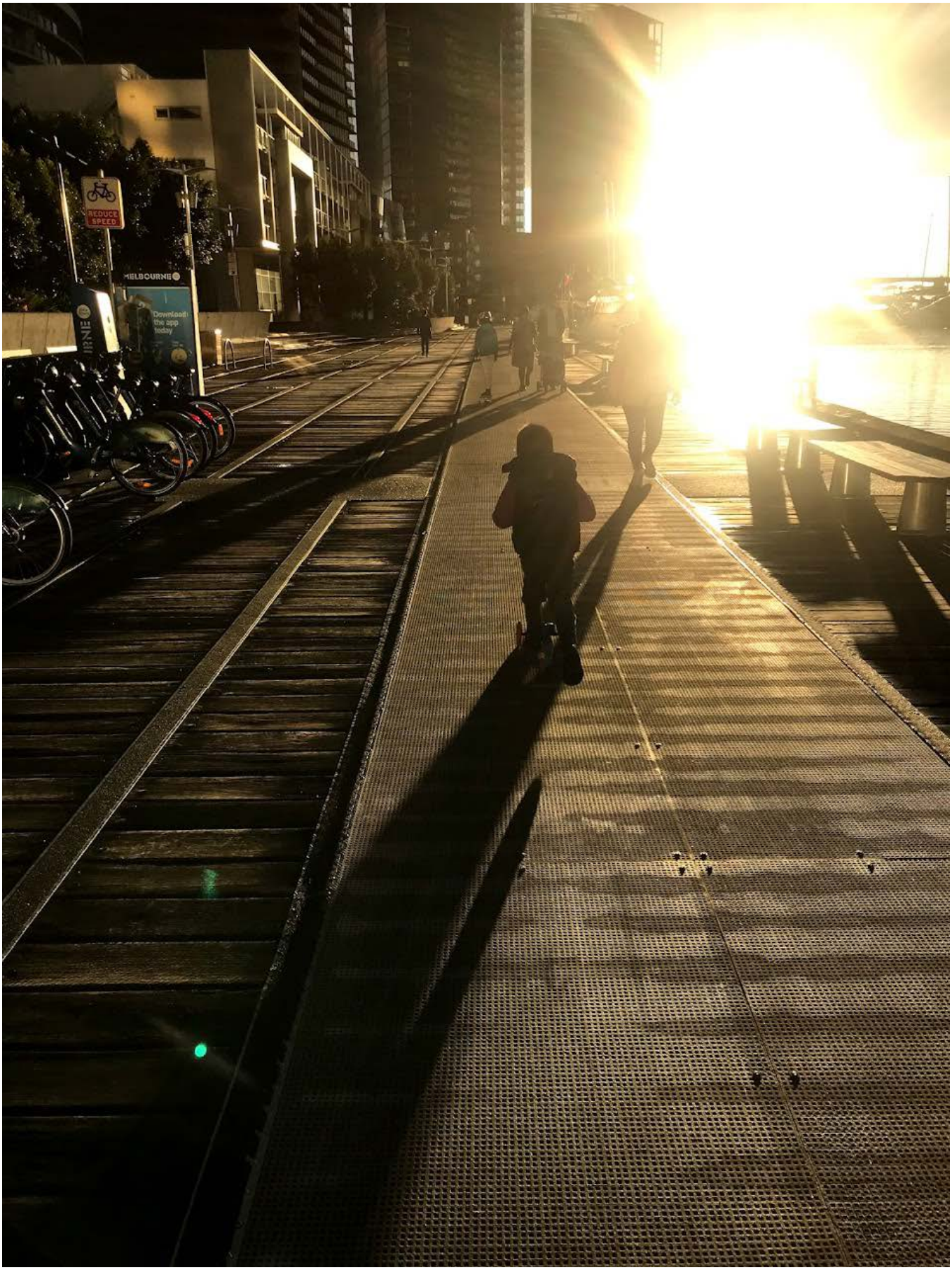

Sun setting between buildings in Melbourne's Docklands precinct (image by Wendy Walls, 2019).

LANDSCAPE
REVIEW

Foreword

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KEY WORDS
heat; design; landscape architecture

It's getting hot in here.

The world is estimated to heat 2.7 degrees Celsius above the pre-industrial average by 2100. The impact of just a few degrees will be vast. Expect hotter cities and changing weather, higher energy consumption, human health effects and even more fundamental questions about how we spend time outdoors (Climate Action Tracker 2025; Climate Council, 2025; CSIRO, 2025; IPCC, 2018). When such problems are perceived as isolated, heat mitigation strategies are often single-factor responses, separated from concurrent social, cultural or political concerns and measured accordingly. However, heat is an interconnected force with a wide-ranging influence.

This special issue of *Landscape Review* looks to heat as a question for design at the intersections of environment and culture, physical space and lived experience. The collection of papers offers a range of perspectives on landscape architecture design and the complications of collaborating in this heating world – from responding to the material impacts of heat on plant communities, to how we work with fluctuating thermal conditions. This diversity of topics is all the more important as we approach the global warming threshold of 1.5 degrees Celsius set by the Paris Agreement and yet governments continue to debate policy and emissions targets (UNFCCC, 2025; United Nations, 2025). Whether we mitigate or adapt, working with the diverse effects of heat will be core to the future of landscape architecture. The papers in this special issue offer valuable ideas and methods in support of navigating this uncertain future.

Penny Allan, Martin Bryant, Peter Ridgeway and Andrew Toland from the University of Technology Sydney examine the link between groundwater and cool environments. Using map-based research, their investigation looks at Chain of Ponds networks in the Cumberland Plain in Western Sydney – one of the hottest urban environments in Australia (and sometimes the world). They present critical disciplinary mapping practices that navigate landscape histories and unfold deep stories of place. More so, they offer insight into practices of care linked to recognising and regenerating Chain of Ponds landscapes as part of healthy and resilient cities.

Paul Quinlan, landscape architect, opens a provocative discussion on the future of weeds in Aotearoa New Zealand. His paper reflects on the impact of climate change and the ecological forecast for native forests and ecosystems. As weeds continue to flourish, despite strategies involving their removal, herbicides and regeneration of native plants, he asks how we might reconcile our approaches with this evolving environmental state. Quinlan calls for a new mindset, posing the need for a major reconceptualisation of nature and its practical management where 'working *with* rather than warring *against* these weeds is undoubtedly the only pragmatic option'.

Silvia Tavares and Jiawei Fu, based at the University of the Sunshine Coast, discuss the role of landscape architecture and urban design in implementing heat mitigation strategies in complex urban environments. While this work often demands multidisciplinary knowledge, the authors highlight the many barriers to practice arising from funding models, policy boundaries and training gaps. They argue for designers and planners positioning the challenge of heat with local culture, identities and thermal perception, as well as for more effective communication between the science community and built environment professionals.

Jillian Walliss and I reflect on a decade of teaching design studio on heat at the University of Melbourne. Despite the growth and accessibility of data and digital tools over this period, students' attitudes towards learning about complex conditions of climate and

atmosphere are often reductive rather than expansive. Whereas technology should be enabling creative rigour in design responses, too often students rely on quantification with little interest in exploring possibilities. These tensions about holistic competencies are growing as artificial intelligence continues to influence higher education, highlighting how critical thinking needs to remain central to teaching design.

Yanhan Li, Liang Li, Wenqing Wang and Lanxi Yang from Beijing Forestry University, along with Gillian Lawson from Lincoln University, introduce the concept of *thermal alliesthesia* as an important complement to physical design responses to urban heat. Illustrating this work through the design of an urban greenway in Beijing, the paper offers lessons to designers and planners on how to enhance the thermal comfort of walking through cities. This approach not only addresses heat as a physical effect but also expands to account for experience and subjective perception. Bringing these different perspectives together promotes greater socio-physical activities like walking and other forms of exercise, further building the resilience of urban communities.

Finally, I examine the design potential of heat in the unique cultural landscape of the Melbourne General Cemetery. This paper suggests that the design theory of microclimatic materiality can offer a useful perspective for engaging with small-scale fluctuations in temperature over time and can inform design for both environmental and social diversity.

I warmly (pun intended) thank the authors for sharing ideas, the reviewers for their generous feedback, and the *Landscape Review*'s editorial and production team for their expertise and care in bringing this work together.

REFERENCES

Climate Action Tracker (**2025**) CAT Thermometer. Accessed October 2025, https://climateactiontracker.org/global/cat-thermometer/.

Climate Council (**2025**) Compounding climate risk: new government report warns that Australia could face severe impacts. Accessed 24 October 2025, https://www.climatecouncil.org.au/resources/briefing-paper-national-climate-risk-assessment-ncra/.

CSIRO (**2025**) *Climate projections for Australia*. Accessed October 2025, https://www.csiro.au/en/research/environmental-impacts/climate-change/Climate-change-information.

IPCC [Intergovernmental Panel on Climate Change] (**2018**) *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change*, V. Masson-Delmotte; P. Zhai; H.-O. Pörtner; D. Roberts; J. Skea; P.R. Shukla; A. Pirani; W. Moufouma-Okia; et al, Eds.; Cambridge and New York: Cambridge University Press. Accessed October 2025, https://www.ipcc.ch/sr15.

UNFCCC [United Nations Framework Convention on Climate Change] (**2025**) The Paris Agreement. Accessed October 2025, https://unfccc.int/process-and-meetings/the-paris-agreement.

United Nations (**2025**) Climate Action Net Zero. Accessed October 2025, https://www.un.org/en/climatechange/net-zero-coalition.